CLAIMS

This listing of claims replaces all prior versions and listings of claims in the application. Where claims have been amended and/or canceled, such amendments and/or cancellations are done without prejudice and/or waiver and/or disclaimer, and the applicant reserves the right to claim this subject matter in a continuing application:

1. (Currently amended)   An image compensating method, comprising:

scanning a document, a longitudinal white pattern, and a longitudinal black pattern, thereby producing a plurality of actual gray level values for a plurality of pixels of the document;

determining a plurality of correctional gray level values for complete black and a plurality of correctional gray level values for complete white based at least in part on the longitudinal black and white patterns;

determining a compensational gray level value with respect to the actual gray level value for each of the pixels based at least in part on a respective one of the correctional gray level values for complete black, a respective one of the correctional gray level values for complete white, a theoretical gray level value for complete black, a theoretical gray level value for complete white, and the actual gray level value for each of the pixels; and

compensating a scanned image of the document using the compensational gray level value for each of the pixels.

2. (Previously presented)   The image compensating method as recited in claim 1, wherein the method is used in a scanner and the scanner comprises:

a top;

a scanning chassis configured to be movable under the top; and

a scanning platform disposed at the top, wherein the scanning platform is configured to support the document above the scanning chassis,

wherein the longitudinal black and white patterns are disposed on an inner wall of the top adjacent to the scanning platform, such that the scanning chassis can scan the document and the longitudinal black and white patterns substantially simultaneously.

3. (Currently amended)   The image compensating method as recited in claim 1, wherein determining the compensational gray level value for each pixel comprises:

calculating [(each of the actual gray level values with respect to each of the pixels - the respective correctional gray level value for complete black) / (the respective correctional gray level value for complete white - the respective correctional gray level to value for complete black) x (the theoretical gray level value for complete white - the theoretical gray level value for complete black)].

4. (Currently amended)   An image compensating method, comprising:

scanning a document and a longitudinal complete white pattern, thereby producing a plurality of actual gray level values for a plurality of pixels of the document;

determining a plurality of correctional gray level values for complete white based at least in part on the longitudinal white pattern;

determining a compensational gray level value with respect to the actual gray level value for each of the pixels based at least in part on a respective one of the correctional gray level values for complete white, a theoretical gray level value for complete white, and the actual gray level value for each of the pixels; and

compensating a scanned image of the document using the compensational gray level value for each of the pixels.

5.   (Previously presented)   The image compensating method as recited in claim 4, wherein the method is used in a scanner and the scanner comprises:

a top;

a scanning chassis configured to be movable under the top; and

a scanning platform disposed in the top, wherein the scanning platform is configured to support the document above the scanning chassis,

wherein the longitudinal complete white pattern is disposed on an inner wall of the top adjacent to the scanning platform, such that the scanning chassis can scan the document and the longitudinal complete white pattern substantially simultaneously.

6. (Currently amended)   The image compensating method as recited in claim 5, wherein determining the compensational gray level value for each pixel comprises:

calculating [each of the actual gray level values with respect to each of the pixels x (the theoretical gray level value for complete white / the <u>respective</u> correctional gray level value for complete white)].

7. (Currently amended)   An image compensating method, comprising:

scanning a document and a longitudinal complete black pattern, thereby producing a plurality of actual gray level values for a plurality of pixels of the document;

determining a <u>plurality of</u> correctional gray level value<u>s</u> for complete black based at least in part on the longitudinal black pattern;

determining a compensational gray level value with respect to the actual gray level value for each of the pixels based at least in part on <u>a respective one of</u> the correctional gray level values for complete black, a theoretical gray level value for complete black, and the actual gray level value for each of the pixels; and

compensating a scanned image of the document using the compensational gray level value for each of the pixels.

8. (Previously presented)   The image compensating method as recited in claim 7, wherein the method is used in a scanner, and the scanner comprises:

a top;

a scanning chassis configured to be movable under the top; and

a scanning platform disposed in the top, wherein the scanning platform is configured to support the document above the scanning chassis,

wherein the longitudinal complete black pattern is disposed on an inner wall of the top adjacent to the scanning platform, such that the scanning chassis can scan the document and the longitudinal complete black pattern substantially simultaneously.

9. (Currently amended)   The image compensating method as recited in claim 7, wherein determining the compensational gray level value for each pixel comprises:

calculating [each of the actual gray level values with respect to each of the pixels - (the respective correctional gray level value for complete black - the theoretical gray level value for complete black)].

10. (Currently amended)   An apparatus comprising:

a top portion having a surface;

a scanning chassis configured to be moveable under the top portion;

a scanning platform disposed at the top portion, the scanning platform configured to support a document above the scanning chassis;

a reference pattern disposed on the surface of the top portion adjacent to the scanning platform; and

a processor configured to:

determine actual gray level values for each pixel of a scanned image of the document;

determine compensational gray level values for each pixel of the scanned image based at least in part on the reference pattern; and

compensate the scanned image using the compensational gray level values.

11. (Previously presented)   The apparatus of claim 10, wherein the processor is further configured to determine a correctional gray level value based at least in part on the reference pattern.

12. (Previously presented)   The apparatus of claim 11, wherein the reference pattern comprises a black pattern and a white pattern, and wherein the processor is further configured to determine a black correctional gray level value and a white correctional gray level value.

13. (Currently amended)   The apparatus of claim 12, wherein the processor is further configured to determine the compensational gray level value of a particular one of the pixels based at least in part on the black correctional gray level value, the white correctional gray level value, a theoretical gray level value for complete black, a theoretical gray level value for complete white, and the actual gray level value for each of the particular pixels.

14. (Previously presented)   The apparatus of claim 11, wherein the reference pattern comprises a black pattern, and wherein the processor is further configured to determine a black correctional gray level value.

15. (Currently amended)   The apparatus of claim 14, wherein the processor is further configured to determine the compensational gray level value of a particular one of the pixels based at least in part on the black correctional gray level value, a theoretical gray level value for complete black, and the actual gray level value ~~for each~~ of the particular pixels.

16. (Previously presented)   The apparatus of claim 11, wherein the reference pattern comprises a white pattern, and wherein the processor is further configured to determine a white correctional gray level value.

17. (Currently amended)   The apparatus of claim 16, wherein the processor is further configured to determine the compensational gray level value of a particular one of the pixels based at least in part on the white correctional gray level value, a theoretical gray level value for complete white, and the actual gray level value ~~for each~~ of the particular pixels.

18. (Previously presented)   The apparatus of claim 10, wherein a length of the reference pattern is equal to or greater than a length of the scanning platform.

19. (Currently amended)   An apparatus comprising:
a top having a surface;
means for scanning configured to be moveable under the top;
means for supporting a document above the means for scanning;
means for referencing disposed at the surface of the top adjacent to the means for supporting; and
means for ~~processing~~ image compensating configured to:
determine actual gray level values for each pixel of a scanned image of the document;

determine compensational gray level values for each pixel of the scanned image based at least in part on the means for referencing; and

compensate the scanned image using the compensational gray level values.

20. (Currently amended)   The apparatus of claim 19, wherein the means for ~~processing~~ image compensating is further configured to determine a correctional gray level value based at least in part on the means for referencing.

21. (Currently amended)   The apparatus of claim 20, wherein the means for referencing comprises a black pattern and a white pattern and wherein the means for ~~processing~~ image compensating is further configured to determine a black correctional gray level value and a white correctional gray level value.

22. (Currently amended)   The apparatus of claim 20, wherein the means for referencing comprises a black pattern, and wherein the means for ~~processing~~ image compensating is further configured to determine a black correctional gray level value.

23. (Currently amended)   The apparatus of claim 20, wherein the means for referencing comprises a white pattern, and wherein the means for ~~processing~~ image compensating is further configured to determine a white correctional gray level value.

24. (Previously presented)   The apparatus of claim 19, wherein a length of the means for referencing is equal to or greater than a length of the means for supporting.

25. (Currently amended)   An ~~article of machine~~ computer-readable media containing code that, when executed by a ~~machine~~ computer, causes the ~~machine~~ computer to:

scan a document and a reference pattern;

determine actual gray level values for each pixel of a scanned image of the document;

determine compensational gray level values for each pixel of the scanned image based at least in part on a scanned image of the reference pattern; and

compensate the scanned image using the compensational gray level values.

26. (Currently amended)   The ~~article~~ <u>computer-readable media</u> of claim 25, wherein the code further causes the ~~machine~~ <u>computer</u> to determine a correctional gray level value based at least in part on the reference pattern.

27. (Currently amended)   The ~~article~~ <u>computer-readable media</u> of claim 26, wherein the reference pattern comprises a black pattern and a white pattern and wherein the code further causes the ~~machine~~ <u>computer</u> to determine a black correctional gray level value and a white correctional gray level value.

28. (Currently amended)   The ~~article~~ <u>computer-readable media</u> of claim 26, wherein the reference pattern comprises a black pattern and wherein the code further causes the ~~machine~~ <u>computer</u> to determine a black correctional gray level value.

29. (Currently amended)   The ~~article~~ <u>computer-readable media</u> of claim 26, wherein the reference pattern comprises a white pattern and wherein the code further causes the ~~machine~~ <u>computer</u> to determine a white correctional gray level value.

30. (Currently amended)   The ~~apparatus~~ <u>computer-readable media</u> of claim 25, wherein a length of the reference pattern is equal to or greater than a length of a scanning platform upon which the document is scanned.